

IN THE SPECIFICATION

Page 1, before the first line, add the paragraph:

--This is a continuation application of U.S. Serial No. 10/270,543, filed October 16, 2002, which is a continuation application of U.S. Serial No. 10/023,719, filed December 21, 2002, now U.S. Patent No. 6,529,467, which is a continuation application of U.S. Serial No. 09/773,557, filed February 2, 2001, now U.S. Patent No. 6,343,056, which is a continuation application of U.S. Application Serial No. 09/149,051, filed on September 8, 1998, now U.S. Patent No. 6,236,635.--.

Pages 28-31, the paragraph bridging these pages from page 28, line 24 to page 31, line 19, replace the bridging paragraph with:

The energy beam pulse waveforms shown in Fig. 11 have the highest practical value among the embodiments, and can effectively suppress the jitters. In the energy beam pulse waveform used for information recording, a jitter value of 9% or less can be obtained by using four power levels including P2, P3, P4 and P5 having the above-mentioned relation. Fig. 11 shows only the mark portions having the length of 3T, 4T, 6T, 11T. In the mark portions having the length of 5T to 10T, however, a set of waveforms each having a combination of a high power level pulse and a low power level pulse is added

for each $T/2$ following the first pulse of the $4T$ waveform. The result of adding seven such sets is an energy beam pulse train for recording a mark portion having the length of $11T$. Pulses are added similarly also for the mark portions longer than $11T$. As described above, of all the pulses having a sufficient energy to make an amorphous record film, i.e. the information pulse section of the energy beam pulse waveform, the width of the first pulse is set to $1T$, the width of the last pulse to $1T$ and the width of other pulses to $T/2$. Also, a pulse of preheat level $P5$ with the duration of 0 to $2T$ higher than $P2$ and lower than $P3$ in power level is arranged immediately before the first pulse of power level $P3$. The width of this pulse or preheat level ~~$P3$~~ $P5$ is changed in accordance with the cooling rate of the medium, the relative speed between the laser beam and the medium, the relation between the radius of the laser beam and the length of the mark portion or the length of the space portion adjacent to a mark portion. As an example, the conditions for the width and power level of each pulse are shown below. (Power level of pulse train of information pulse section)

$P2$: 4.5 mW

$P3$: 10.5 mW

$P4$: 1.5 mW

$P5$: 4.6 mW

(Width of the cooling pulse on the mark edge adjusting pulse section)

Width of the cooling pulse contributing to recording of a mark portion immediately before a space portion 3T, 4T wide: 2.25T

Width of the cooling pulse contributing to recording of a mark portion immediately before a space portion 5T wide: 2T

Width of the cooling pulse contributing to recording of a mark portion immediately before a space portion 6 to 11T wide:

1.75T

Width of the cooling pulse contributing to recording of a mark portion 3T or 4T wide immediately before each space portion:

The above-mentioned width of cooling pulse plus 0.25T

(Width of pulse of preheat level P5 of mark edge adjusting section)

Width of preheat pulse immediately before mark portion 6T wide: 1T

Width of preheat pulse immediately before mark portion 5T or 7T wide: 0.5T

Width of preheat pulse immediately before mark portion 4T wide: 0 to 1.0T (varied depending on the heat conducting characteristics of the medium)

(Width of first pulse of P3 level in pulse train of information pulse section)

Mark portion 3T wide: 1T

Mark portion 4T wide: $1.25T$

Mark portion 5T to 11T wide: $1T$

(Width of last pulse of P3 level in pulse train of information pulse section)

Mark portion 3T wide: $1T$ (same as first pulse)

Mark portion 4T wide: 0.75 to $1T$ (varied depending on the heat conducting characteristics of the medium)

Mark portion 5T to 11T wide: $1T$

(Pulse width of P3 level between first pulse and last pulse)

Mark portion 5T to 11T wide: $0.5T$

(Width of negative-going pulse between pulses of P3 level in pulse train of information pulse section)

Mark portion 4T wide: 0.5 to $0.75T$ (varied depending on the heat conducting characteristics of the medium)

Mark portion 5T to 11T wide: $0.5T$